

TECHNICAL REVIEW DOCUMENT
for
RENEWAL
of
OPERATING PERMIT 95OPPB025
to be issued to:

Aquila, Inc.
Pueblo Power Plant
Pueblo County
Source ID 1010008

Lisa Clarke
December 2007

I. PURPOSE

This document will establish the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the renewed Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA, the public and other interested parties. The conclusions based on this report are based on information provided in the permit renewal application submitted on April 24, 2006 and additional information received April 27, 2007, September 5, 2007, and February 8, 2008. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit renewal application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This Operating Permit incorporates and shall be considered to be a combined Construction/Operating Permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this Operating Permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. SOURCE DESCRIPTION

This facility is located in Pueblo, Colorado. Pueblo is classified as an attainment area for all criteria pollutants. There are no affected states within 50 miles of the facility. The Great Sand Dunes National Park is a designated Federal Class I area within 100 kilometers of the facility. Florissant Fossil Beds is a Federal land area within 100 kilometers of the facility. Florissant Fossil Beds has been designated by the State to have the same sulfur dioxide increment as Federal Class I areas.

There have been several steam driven generating units at the facility since the early 1920s. Unit #1922 (boiler #1, #2 and #3, and turbine #4) was converted from coal burning in the 1960s. The unit was permanently removed from service about January 1, 1990. Unit #1941 (boiler #4 and turbine #5) was permanently removed from service on December 14, 1994. A new natural gas fired boiler

to replace Unit #1941 boiler was placed in service in 2001. The new boiler uses the existing turbine and facility components for the previous boiler. In August 2007, the facility requested to be able to use biodiesel at this facility for the 246 MMBtu/hr boiler and the 5 diesel engines.

The following is the Potential-to-Emit for the sources of emissions at the Power Plant:

POLLUTANT	POTENTIAL TO EMIT, TPY				TOTAL PTE, TPY	2005 ACTUAL EMISSIONS, TPY
	246 MMBtu/Hr BOILER		134.7 MMBtu/Hr BOILER	5 DIESEL ENGINES		
	NG	#2 FO	NG			
PM	9.63	10.01	4.8	112.98	105.18	1.88
PM ₁₀	9.63	10.01	4.8	107.93	101.14	1.88
SO _x	0.76	604.16	0.4	105.23	688.74	0.07
NO _x	126.76	246.28	18.1	1581.75	1529.78	43.83
VOC	6.97	0.00	3.4	108.26	97.48	1.50
CO	106.48	38.48	45.1	344.01	426.79	19.18

NG = natural gas #2 FO = #2 Distillate

The plant is categorized as a major source for the Prevention of Significant Deterioration (PSD) provisions. The plant is one of the PSD special source categories (Fossil fuel boilers (or combinations thereof) totaling more than 250 MMBtu/hr heat input) having a major source threshold of 100 tons per year. The plant is a major source for NO_x, PM, PM₁₀, CO, and SO₂. Future addition of new sources and modifications of existing sources at this plant resulting in a significant net emissions increase (see Reg 3, Part D, Sections II.A.26 and 42) for any pollutant as listed in Regulation No. 3, Part A, Section I.B.42 or a modification which is major by itself may result in the application of the PSD review requirements as appropriate. Based on the information available to the Division and supplied by the application, the Division believes that modifications up to this point have not triggered PSD review or Colorado construction permit requirements. HAP emission from the facility are below the major source level (10 tpy of any individual HAP and 25 tpy total HAPS).

MACT Requirements

Since the facility is not a major source for HAPs emissions, none of the emission units at the facility are subject to any MACT requirements.

Compliance Assurance Monitoring (CAM) Requirements

None of the boilers or engines at this facility are equipped with control devices, therefore the Compliance Assurance Monitoring (CAM) requirements do not apply to these units.

III. Discussion of Modifications Made

Source Requested Modifications

The source submitted their renewal application on April 24, 2006. In their renewal application, the source requested that the Responsible Official and Permit Contact be updated. These changes have been made as requested.

In addition, the source requested that the insignificant activity be revised to include chemical storage areas that are in covered containers and are less than 5,000 gallons and to add a paint booth that has air pollutant emissions of less than two tons per year (APEN de minimis levels). These changes have been made as requested.

The source subsequently submitted a request to use 20 percent biodiesel (B20) at this facility in the grandfathered dual-fired boiler and diesel-fired engines on September 5, 2007. Since there is a paucity of emission factor data available for biodiesel at this time, the Division assumes that emissions are approximately equal to the previous No. 2 distillate emissions. The units at this facility capable of accommodating the biodiesel (B20) fuel are grandfathered. Since the source was capable of accommodating this fuel before January 6, 1975, the addition of biodiesel to the list of acceptable fuels is not considered a physical change or change in the method of operation, and is therefore not a significant modification with regard to PSD (§52.21(B)(2)(iii)(e)(1)). This request is considered to be a minor modification for Title V purposes and has been rolled into this second Title V permit renewal.

The source submitted comments on the Title V draft permit on February 8, 2008. The source requested that the 300,000 above-ground fuel storage tank be designated an insignificant source. The source also noted several minor changes needed in the permit, such as removing the maximum Btu value from condition 1.5.2 and revising Condition 2.4.

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permit, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the Pueblo Power Plant Renewal Operating Permit with the source's requested modifications. These changes are as follows:

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- It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).
- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office by the due date and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Section I – General Activities and Summary

- Biodiesel (B20) was added to the facility description as applicable in Condition 1.1.
- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit. In addition, General Condition 3.g (common provisions, affirmative defense) was added as a state-only condition in Condition 1.4.
- Biodiesel (B20) was added to the equipment description as applicable in Condition 1.6. Also deleted air pollution control device (non-applicable since none of the units have controls) and added a startup year column.

Section II.1 – S006 – 246 MMBtu/Hr Babcock and Wilcox Boiler, Natural Gas or No. 2 Fuel Oil/Biodiesel (B20) Fired

- These conditions were completely revised in order to update the permit and clarify specific federal and state-only conditions. General note: this section was condensed into one condition area (Section II.1 from Sections II.1 and II.2).
 - Condition II.1.1 was clarified to include the equation to determine tons/year using annual fuel consumption and listed emission factors.

- Condition II.1.2 was updated according to reflect language in recently issued Operating Permits for the PM standard.
- Condition II.1.3 was updated to reflect SO₂ emission limitations (previously Condition II.2.3).
- Condition II.1.4 was added to require monitoring of the fuel oil and biodiesel (B20) sulfur content using vendor receipts or quality reporting certificates.
- Condition II.1.5 (previously Condition II.1.4) was revised to clarify fuel consumption recordkeeping.
- Condition II.1.6 is the opacity requirements, which have been updated (previously Condition II.1.3) to reflect language in similar recently issued Operating Permits.
- Condition II.1.7 was previously Condition II.1.5 and remains the same.

Section II.2 – Five 2000 KW Diesel/Biodiesel (B20) Powered Generators

- These conditions were completely revised in order to update the permit and clarify specific federal and state-only conditions. This section was previously Section II.3.
 - Condition II.2.1 (previously II.3.3) was clarified to include the equation to determine tons/year using annual fuel consumption and listed emission factors.
 - Condition II.2.2 (previously II.3.1) was revised to clarify fuel consumption recordkeeping.
 - Condition II.2.3 was added to require sampling of No. 2 fuel oil (and B20 biodiesel) annually using appropriate ASTM to ensure that the different fuels are complying with heat content and sulfur content.
 - Condition II.2.4 is the opacity requirements, which have been updated (previously Condition II.3.3) to reflect language in similar recently issued Operating Permits.

Section II.3 – S007 – 134.7 MMBtu/Hr ABCO Industries Boiler Type “D” SN S0200003

- These conditions were completely revised in order to update the permit and clarify specific federal and state-only conditions. This section was previously Section II.5. An additional note indicates that although this facility is considered a major

stationary source, the net emission increase from this modification remained below PSD significance levels and PSD review was not required.

- Condition II.3.1 (previously II.5.1 and II.5.2) was clarified to include the equation to determine tons/year using annual fuel consumption and listed emission factors.
- Condition II.3.2 (previously II.5.7) was revised to clarify applicable requirements of NSPS Subpart Db for this unit.
- Condition II.3.3 (previously II.5.8) was updated to reflect language from similar recently issued Operating Permits.
- Condition II.3.4 (previously II.5.3) was updated according to reflect language in recently issued Operating Permits for the PM standard.
- Condition II.3.5 was added to clarify fuel consumption recordkeeping.
- Condition II.3.6 (previously II.5.4 and II.5.5) is the opacity requirements, which have been updated to reflect language in similar recently issued Operating Permits.
- Condition II.3.7 was changed from the previous condition II.5.6.
- Condition II.3.8 (previously II.5.9) was updated to note that PEMS plan has been submitted and the facility must comply with that plan.

The following conditions were deleted:

- Condition II.4 – T001 – 300,000 Gallon Above Ground Fuel Oil Storage Tank
 - This section was deleted since the tank is now exempt due to changes in NSPS Subpart KKK exempting tanks with a capacity greater than 151 cubic meters storing liquid with a vapor pressure less than 3.5 kPa. The liquid in this tank is one of No. 2 fuel oil (diesel), or 20% biodiesel, either of which have vapor pressures around 0.062 kPa or less.
- Condition II.6 – Special Condition Parameter Profile
- Condition II.7 – Insignificant Activities
- Condition II.8 - Reporting

Section IV – General Conditions

- This section was updated to the most recent version from February 2, 2007. These changes include:
 - Added language from the Common Provisions (“new” condition 3). With this change the reference to “21.d” in Condition 20 (prompt deviation reporting) will be changed to “22.d”, since the general conditions are renumbered with the addition of the Common Provisions.
 - Removed the Upset Provisions from Condition 4 (emergency provisions), since the upset provisions are included in the Common Provisions.
 - The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from “Reg 1” to “Reg 9”.
 - General Condition No. 20 (prompt deviation reporting) was revised to include the definition of prompt in 40 CFR Part 71.
 - Replaced the phrase “enhanced monitoring” with “compliance assurance monitoring” in General Condition No. 21.d (recordkeeping and reporting requirements).

Appendices

- Appendix A insignificant activity list was revised accordingly.
- Appendices B and C were replaced with revised Appendices (version 2/20/07).
- Appendix D was updated with the correct addresses for the EPA.
- Appendices G and H were removed from the permit due to repetition.